

Research and Exploration

Formulating Conjectures

Now that students have formed research groups and articulated problems, they are ready to formulate conjectures and use their conjectures to focus their research.

Begin by explaining that a conjecture is a kind of educated guess, an explanation based on incomplete evidence.

- Tell students that conjectures are similar to the predictions they make while reading. Like predictions, conjectures are ideas that make sense based on preliminary information.
- Explain that conjectures may be proved right or wrong and should be modified by the evidence as research progresses.

Hold a group discussion and model how to make conjectures.

- Choose a problem that has already been suggested for research but has not been chosen by any research group.
- Ask yourself aloud, *What do I think the answer to this research problem or question might be?* Then give your first thoughts about possible answers, explaining why you think as you do.
- Ask students to share their conjectures for the demonstration problem. Record the conjectures on the board.
- Explain that it is not necessary for everyone to agree on one conjecture. Point out that the research cycle is a recursive process; therefore, researchers continually return to previous phases of the cycle to reassess and refine conjectures.

Have students break into groups and discuss possible conjectures for their group problems.

- Circulate among the groups and help students recognize that there may be more than one conjecture, and that all should be valued and respected.
- Have students record their conjectures on page 27 of the *Inquiry Journal*.

Tell students to use their conjectures to guide their investigation efforts. Provide time during the week for students to proceed with research.

- Remind students that their research goal is to support the conjecture with facts or to find information that will help them revise or write a new conjecture.



Formal Assessment

Use the Research Rubrics on page 162J to assess students' ability to recognize information needs.



Teacher Tip INVESTIGATION

ACTIVITIES Rephrase students' conjectures to elicit additional information from them. This will help students clarify and refine their ideas.

Name _____ Date _____

Ancient Civilizations UNIT 2

Recording Conjectures

Our problem:
Answers will vary.

Conjecture (my first theory or explanation):
Answers will vary.

As you collect information, your conjectures will change. Return to this page to record your new theories or explanations about your investigation.

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